

enemy. On being approached she directs them to the nearest cover, generally a patch of reeds, and as soon as it is reached they all disappear except the parent. A careful watch kept on the edge of the patch will usually reveal her swimming slowly back and forth with only the eyes and bill above water. It is almost impossible to find the young once they have entered the weeds, as they are adept at hiding and remaining motionless.

In August after the young are feathered out and almost fully grown, the grebes in one swamp or pond sometimes assemble in one flock and feed together. The largest number I ever noted was on August 19, 1913, in the same swamp in which the notes of June 26 were made. This flock numbered, as near as could be counted, two hundred. I watched them for some time and saw them eating numbers of the small frogs which swarmed about the water's edge and on the mud flats. Occasionally two would seize the same frog and attempt to swallow it. This would cause a tug of war, in which several others sometimes joined, and often neither of the original contestants finally secured the prize.

Marshalltown, Iowa.

THE ROLL OF THE LOG-COCK OR PILEATED WOODPECKER.

BY ERNEST W. VICKERS.

For several years I enjoyed the rolling call of a Pileated Woodpecker, which from the peculiar resonance of sounding-board carried to an almost incredible distance. The scene was located a mile and a quarter from my home, and impossible as it may appear I have heard the roll when in the house with doors and windows closed; this of course when atmospheric conditions were favorable. Out of doors the sound doubtless carried two miles.

This sounding-board of the Log-cock was the big hollow arm of a great tulip-tree or white-wood (*Liriodendron tulipi-*

fera), usually miscalled "poplar" of the lumbermen, eighty to one hundred feet high, which stood on an eminence between two towns and towards the west end of a strip of timber over two miles long. This big arm was flung westward and parallel with the earth at a height of 50 to 60 feet, and the spot on it where he hammered was barkless, seasoned, hard and white, for it had been used for years.

Long had I heard the drummer ere I located the drum, which I did one early day in spring.

By care and stealth I approached near enough with my glass to observe the bird to good advantage.

His *modus operandi* was as follows: Sitting upright lengthwise on the limb, grasping it firmly and bracing himself with his tail, poised and with head drawn back and eyes fixed on the spot to be struck; then, making a pass or two, as if about to begin as a skillful penman makes a preliminary flourish, he came suddenly and almost savagely down on the limb; and though the blows were slowly and lightly delivered at first, they increased in speed and force one by one to the highest power, whence they diminished to the close. Thus his roll was composed of a dozen strokes delivered as an ascending and descending climax. These tones were of a peculiar rich, resonant xylophone quality, echoing in ever widening and pleasing circles off through the woods.

After the delivery he would relax, pause as if to note the effect, or more probably to listen for a response from mate or distant neighbor, for this habit may hark back to a time when some such means of "wireless" was necessary in the vast reach of unbroken forest. Thus there were codes ere Morse's invention and ere the white man arrived to plant the poles.

Then he would hop about on the limb a little perhaps, cock his head this way and that to take in the world below, dress his feathers for a time or search for parasites. But, although so deliberate, he did not long forget what he was there for and would gather himself together to smite his musical instrument again. The gravity and intense concentration of this act made it almost ludicrous to the beholder were it not for

his earnestness and preoccupation. With such energy did he hammer that his whole body shook and his wings quivered, while the splendid scarlet of his loose hair-like crest flowed in the bright spring sunshine, added to which his scarlet mustaches gave him a distinguished and savage air.

Later in the season I placed my camera high in a neighboring birch and waited beneath with more or less patience vainly hoping to catch him in the act. But he must have been haunting some distant portion of his range, for he never came near.

Several years since the big tulip-tree came down in a storm and I miss the wonderful roll that used to travel so far. Occasionally I heard his bill on some punky old snag, but it is not probable that he will ever find another sounding board comparable with the old white wood arm.

This is the only Pileated Woodpecker I ever saw beat upon a horizontal limb by habit. This is the only case that has come under my observation where a log-cock has selected a horizontal sounding board.

I afterward sought in the debris of the uprooted tulip for this musical limb, but it was impossible to discover a trace of it more than if so wonderful a thing had been whisked off by magic. It would have been good to have taken its caliber and that of the cavity within and to have examined that smooth hard spot where he had smote full lustily so oft.

The roll of the Pileated woodpecker is one of the most impressive sounds in nature, and among the noblest of spring, being most frequently heard on still, humid mornings when the air seems hungering to transmit sound; the earth is vapping, mellowing ripening for the plow. The glad strain of the meadow-lark bursts everywhere from the ground, and the cackle of the flicker comes from sunny places. All the woodpecker tribe love to beat the tom-tom in such weather, but the stately roll of *Hylotomus* easily lords it over all. It is then as the gavel of the speaker calling the Whole House of Nature to order after the defection and chaos of winter.